

Utah County/B1-3, 6, 7
Weather/B2
Deaths/B7

Utah County

Tuesday, April 3, 1990

Water strike stalls work on part of Olmstead Tunnel

■ **Drilling:** Crews hit water near Bridal Veil Falls. Officials say Provo's supply won't be permanently affected.

By Brooke Adams
Deseret News staff writer

PROVO — Work on a portion of the Olmstead Tunnel under construction in Provo Canyon has been halted temporarily because water was encountered during drilling.

Lee Renegar, project manager for Morrison-Knudson Co. Inc., said crews encountered water approximately 307 feet into

drilling a 380-foot-long portion of the tunnel near Bridal Veil Falls on Feb. 16. Work was halted on the upper portion of the tunnel on Feb. 22, Renegar said.

The 1.5-mile tunnel, which will accommodate a section of the Olmstead Aqueduct, is being bored from both ends. The upper section of tunnel is being drilled and blasted, while a mechanical mole is boring through the mountain to create the lower end of the tunnel.

Renegar said a large cavern was found above the tunnel in the same area. The cavern indicates a water course through the mountain, said Merril Bingham, director of water resources and public works for Provo.

"They cut the bottom end off the cavern," Bingham said. "You can look up 80 to 90 feet." From within the cavern, it is possible to see even farther, Bingham said.

An environmental assessment completed by the Bureau of Reclamation before beginning work on the tunnel said the project would have no significant impact on the city's springs, although spring production could be disrupted during tunnel construction. An engineer hired by Provo to conduct an independent evaluation of impact on the springs said an impact was "possible qualitatively and quantitatively, but the level of impact is low to very low."

"In terms of tunneling, it (the water) is not a problem," Renegar said. He also said Pro-

vo's water supply won't be permanently affected.

Bingham agrees, although he says "We would have preferred to not hit any water with the tunnel."

"The water represents . . . about 4 percent of the peak day demand," Bingham said. "We're not talking about a large block of water, but it is still important to us."

"The critical thing for us is that they get the water back in three to four weeks before we begin experiencing peak demand," Bingham said.

Renegar said the flow of water in the tunnel was about 200 to 250 gallons per minute.

Bingham, however, estimated the flow to be 300 to 400 gallons per minute. The water probably comes from the backside of Mount Timpanogos, works its way through the mountain and flows into Provo's spring boxes at Thayer's Flat, Bingham said.

A dye poured into the water in the tunnel showed up in several of the spring boxes. Also, silt dumped into the water while work was under way in the tunnel showed up in the springs, Bingham said.

An automatic cutout caused the water entering the springs to be diverted to the river as soon as silt was detected, Bingham said. To compensate for the diverted water, Provo

Please see TUNNEL on B2

TUNNEL

Continued from B1

has turned on an additional well — which means the city is using three of its nine water wells.

According to an agreement between the city and the Central Utah Water Conservancy District, which along with the Bureau of Reclamation is building the tunnel, the water district will pay the cost of turning on the third well. Bingham said electric-

ity costs for running the well are roughly \$300 per day; the well has been operating for 10 days so far.

"The important thing was we had an agreement that provided a measure of protection," Bingham said. Provo also has an agreement with the water district to replace any water sources that are permanently disrupted because of the tunnel.

The water flowing through the tunnel has been redirected to the Olmstead Aqueduct until that section of tunnel is completed. It will

then be redirected around the tunnel and back toward the springs.

Renegar said approximately 10 feet of concrete has been poured into the cavern to stabilize it. Concrete also has been poured into an 8-foot section at the end of the tunnel where the water was found. In three to four days, a tunnel crew will be beginning boring through the mountain again, passing first through the newly poured concrete.

Renegar said the tunnel should be completed in about six weeks.

Canyon tunnel drilling three-quarters finished

4-20-90
By JOSEPHINE ZIMMERMAN
Herald Staff Writer

Drilling of the Olmstead Tunnel in Provo Canyon is 71 percent complete, Sheldon Talbot, engineer for the Central Utah Water Conservancy District told the CUWCD board Thursday.

The \$9.6 million tunnel will carry the Olmstead flow line (green snake) through the mountain where periodic interruptions have occurred when the pipeline slipped down the loose-shale mountain. By tunneling through the mountain the district believes the problem can be solved.

Talbot said the "mole" used in drilling started at the downstream end and is now nearly three-fourths of the way through. Although the drilling is four to five days behind schedule, he anticipates completion by May 8.

"We anticipate beginning to pull the machine out on that date," he said.

Talbot said the contractor is pouring concrete on the floor of the tunnel's upper portion now in order to add strength for when they pull the mole out.

In the central part of the tunnel, the contractor ran into poor quality

rock which caused some problems; but the drilling is now in competent rock, he said. The work is progressing at 110 to 120 feet per day on the mile-long tunnel.

Talbot also discussed problems with water in the tunnel encountered when the contractor cut through the source of some of Provo's canyon springs.

"There's no problem in a tunnel that is not serious," he said.

He reported that a section of the tunnel roof dropped, and water entered the tunnel.

"The void has been filled with concrete, and the contractor then drilled through the concrete to advance the tunnel. We are going back to put a permanent fixture in the tunnel to feed the water into Provo's springs," he said.

When the tunnel drilling is complete, the contractor will then begin installing the concrete lining.

Talbot also reported on status of the Trial Lake dam and dike on the upper Provo River.

The board voted to authorize bidding on replacement of the dam and dike.

Talbot said the Forest Service is now working on a special use permit for the project.